

Appl. No. 10/508,852
 Amdt. dated April 24, 2006
 Supplemental Response to Office Action of October 7, 2005

Amendments to the Claims

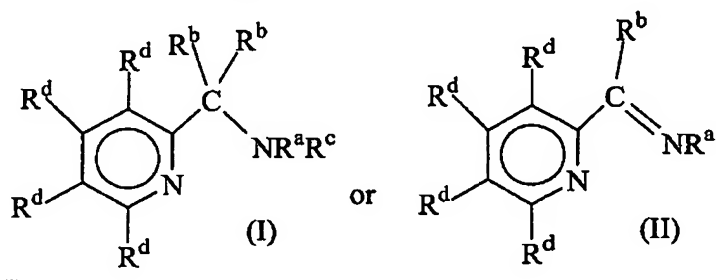
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A solid, hydrocarbon insoluble catalyst composition comprising:

A) a solid, particulated complex comprising moieties of at least magnesium, a Group 4 transition metal, and a halide;

B) one or more α -amino-substituted- or α -imino- substituted- 2-alkylpyridine compounds corresponding to the formula:



wherein:

R^a is aryl, or an aryl group substituted with one or more alkyl, halo, haloalkyl, or dihydrocarbylamine groups, said R^a group having from 6 to 30 carbons;

R^b and R^d, independently each occurrence, are selected from the group consisting of hydrogen, R^a, C₁₋₁₀ alkyl, C₁₋₁₀ haloalkyl, and C₇₋₂₀ aralkyl with the proviso that at least one of R^d is a bulky, polycyclic aromatic group; and

R^c is hydride, an alkali metal cation, an alkaline earth metal halide cation, or a cationic organometal ligand comprising a metal of Groups 2-13 of the Periodic Table of the Elements;

C) one or more organoaluminum cocatalyst compounds;

D) optionally one or more internal electron donors; and

E) optionally one or more selectivity control agents.

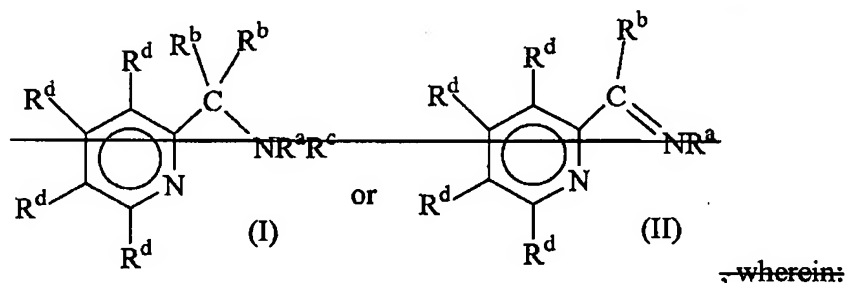
Appl. No. 10/508,852

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2. (original) The catalyst composition as claimed in claim 1, wherein the Group 4 metal is Zr, Hf or a mixture of Zr and Hf.

3. (currently amended) The catalyst composition as claimed in claim 1, wherein ~~the substituted 2-alkylpyridine compound corresponds to the following formula I or II:~~



~~R^a is aryl, or an aryl group substituted with one or more alkyl, halo, haloalkyl, or dihydrocarbylamino groups, said R^a group having from 6 to 30 carbons;~~

~~R^b and R^d, independently each occurrence, are selected from the group consisting of hydrogen, R^a, C₁₋₁₀ alkyl, C₁₋₁₀ haloalkyl, and C₇₋₂₀ aralkyl; and~~

~~R^c is hydride, an alkali metal cation, an alkaline earth metal halide cation, or a cationic organometal ligand comprising a metal of Groups 2-13 of the Periodic Table of the Elements~~ R^d at the 6-position on the pyridine is 1-naphthyl.

4. (currently amended) The catalyst composition as claimed in claim 3, wherein the substituted 2-alkylpyridine compound is ~~2-pyridyl-2-(N-(2,6-diisopropylphenyl)amino)propane or (6-(1-naphthyl)pyrid-2-yl)(N-(2,6-diisopropylphenyl)amino)(2-methylphenyl)methane.~~

5. (original) The catalyst composition as claimed in claim 1, wherein the solid, particulated magnesium and Group 4 metal halide complex corresponds to the formula Mg_dTi(OR^e)_eXf(ED)_g wherein R^e, independently each occurrence is an aliphatic or aromatic hydrocarbon radical having 1 to 14 carbon atoms or COR^f wherein R^f is an aliphatic or aromatic hydrocarbon radical having 1 to 14 carbon atoms; X independently each occurrence is chlorine, bromine or iodine; ED is an electron donor; d is a number

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from 1 to 50; e is a number from 0 to 5; f is a number from 2 to 100; and g is a number from 0 to 10.

6. (original) A method of making a catalyst component as claimed in claim 1 comprising contacting components A), B) and C) and optionally components D) and E) in an inert diluent in any order, with or without intermediate recover of a product, and removing the diluent.

7. (original) A process of polymerizing at least one olefin comprising contacting at least one olefin in the presence of the catalyst composition of claim 1.

8. (currently amended) The process of claim 7 wherein propylene is homopolymerized or copolymerized with one or more olefins or diolefins and the α -amino substituted or α -imino substituted 2-alkylpyridine compound is (6-(1-naphthyl)pyrid-2-yl)(N-(2,6-diisopropylphenyl)amino)(2-methylphenyl)methane.